

What is claimed is:

1. An IP address setting device:

5 a request packet transmitting unit that transmits a request packet to a particular 'multicast address, the request packet requesting transmission of an MAC address from each node of the network;

10 a response reception unit that receives responses from the nodes to the request packet transmitted by the request packet transmitting unit, each response including the MAC address of the corresponding node;

15 an address information designation unit that, based on the responses received from the nodes by the response reception unit, designates a node to be set with address information including an IP address and that designates the address information; and

20 a setting packet transmission unit that transmits a setting packet to the particular multicast address, the setting packet including the address information set by the address information designation unit and the MAC address included in the response from the node.

2. An IP address setting device as claimed in claim 1, wherein the address information designation unit includes:

a display that displays a list with at least a portion of nodes that transmitted response packets;

a selection unit that enables a user to select from the list the node to be set with address information; and

an address information setting unit that sets address information separately to the selected node.

5           3. An IP address setting device as claimed in claim 1, wherein the address information designation unit includes a display unit that displays in a list at least a portion of network printers at nodes that transmitted a response packet.

10           4. An IP address setting device as claimed in claim 1, the address information designation unit designates address information including an IP address, a subnet mask, and a default gateway.

5. An IP address setting device as claimed in claim 1, further comprising:

15           a response unit that transmits to the particular multicast address a response packet including an MAC address of a network printer connected at a node that is a member of the particular multicast address;

20           a packet reception unit that receives, at the node, packets from the particular multicast address and that determines whether a received packet includes the MAC address of the network printer; and

25           an IP address setting unit that, when the packet content determination unit determines that a received packet includes the MAC address of the network printer, sets the

address information including the IP address in the setting packet as address information of the network printer.

6. An IP address setting method comprising:

transmitting a request packet to a particular  
5 multicast address, the request packet including a request for an MAC address of each node of a network;

transmitting, from a node that is a member of the multicast address and that received the request packet, a response packet to the particular multicast address, the  
10 response packet including the MAC address of the node;

receiving the response packet;

designating to set the node that sent the response packet with address information including an IP address;

transmitting to the particular multicast address a  
15 setting packet including the designated address information and the MAC address indicated in the response packet from the node;

receiving the setting packet at the node;

judging whether the MAC address in the received  
20 setting packet is the same as the MAC address of the node;  
and

setting the address information in the setting packet as the address information of the node when the MAC address in the received setting packet is the same as the MAC  
25 address of the node.

7. An IP address setting method as claimed in claim 6, further comprising:

displaying a list of at least a portion of network  
printers connected to a network based on the MAC address in  
5 the response packet;

determining selection of a network printer from the list by a user; and

designating the address information to the network printer selected by the user.

10            8. A network printer comprising:

a request packet reception unit that receives a request packet from a particular multicast address, the request packet requesting transmission of an MAC address:

15       a response unit that transmits to the particular  
multicast address a response packet including a network  
printer MAC address;

a setting packet reception unit that receives a setting packet from the particular multicast address;

20       a content determination unit that determines whether  
the received setting packet includes the network printer MAC  
address; and

an IP address setting unit that, when the packet content determination unit determines that the received setting packet includes the network printer MAC address, sets the address information including the IP address in the

setting packet as address information.

2001年 3月30日 16時06分